Mock Conference's Impact on Internalizing Translating and Interpreting Learners' Motivation

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Abstract: The internalization of motivation in second/foreign language (L2) learning and the use of mock conferences (MCs) to prepare translating and interpreting learners for future professional careers have been widely researched by scholars, but whether MC can facilitate the internalization of T&I learners' motivation is under-researched. Based on self-determination theory (SDT), this thesis investigates the effectiveness of MC in facilitating internalization of motivation through an empirical study which involves a 2-week long pedagogical experiment on two parallel classes of T&I learners taught by the same teacher in their 1st year of graduate study at Graduate School of Translation and Interpretation, Beijing Foreign Studies University. The research shows that compared with traditional teacher-centered teaching model, MCs can better facilitate internalization of T&I learners' motivation. This article justifies the use of MCs as a situated approach in interpreting teaching and describes the design of MCs according to the psychological needs of SDT. In addition, the paper offers suggestions for further improvement of MCs design at the postgraduate level.

Keywords: internalization of motivation, mock conference; second/foreign language (L2) acquisition; self-determination

0 Introduction

0.1 Motivation and interpreter training

Corder's[1] phrase, "Given motivation, anyone can learn language" brings out the importance of motivation and the way it can overcome unfavorable circumstances in other aspects of language learning. Within the field of L2 learning motivation, a great deal of important motivational variables has been identified as contributing to successful language learning. One such variable is related to the classroom setting. For example, factors concerning the instruction and instructors have been investigated to play a significant part in motivating and demotivating language learners.

Chambers'[2], Falout and Maruyama's[3], and Gorham and Millette's[4] explore pedagogy's influence on student motivation and demotivation. Unlike L2 learning which has long been established as a special field of study, interpreting learning at the graduate level is a fairly young field which did not come into being until the 20th century in Europe[5]. Numerous researchers, Arjona[6] and Longley[7] suggest a substantial body of pedagogical practices in interpreting training. However, as Miriam Shlesinger and Franz Pöchhacker[8] point out, the focus of interpreting training is on skill acquisition with "the neglect of applicants' 'soft skills' such as motivation and other personality traits."

In short, interpreting skill acquisition relies heavily on practice and experience, which produces cognitive changes that facilitate the circumvention of cognitive constraints inherent in highly complex tasks such as simultaneous interpreting[9]. Given "the complexity of the interpreting process,"[10] it is necessary for the interpreting learning motivation to drive and sustain efforts under "the factory model"[11].

0.2 Importance of mock conferences (MCs) in interpreter training

The last decade or so has witnessed a shift from a transmissionist to a constructivist perspective in translation classrooms[12]. Interpreting is a highly

situated professional activity as exemplified by different settings: Conference interpreting, court interpreting, and medical interpreting[13]. Herman[14] and Hatim and Mason[15] noted the importance of context in liaison interpreting.

Although interpreting enabled communication between speakers in any setting in which different languages came into contact, interpreting for conference settings became the focus of attention and the leader in establishing standards for both training programs and professional associations[13]. Therefore, the situated approach for interpreter training is appropriate. One of the situated teaching practices in current interpreter training is organizing MCs. Most leading postgraduate programs organize MCs as contextualized environments to help trainees acquire interpreting skills.

The importance of MCs has been widely mentioned by interpreting studies researcher: Ardito[16], De Laet[17], Kurz[18], Lin et al.[19], and Tsuruta and Naito[20]. In her dissertation on learning orientations of T&I learners in China, Lin[21] also mentions offering mock-conference interpreting experience to learners.

0.3 Purpose of the study

Although the significance of motivation in interpreting learning and the importance of MC in interpreter training has been widely explored, there is limited empirical research on the effectiveness of MC in terms of the internalization of T&I learners' motivation. Given such a background, this study is intended to shed light on the subject through an empirical study. By collecting data from statistically tested questionnaires, the study aims to answer the research question:

Of the traditional teacher-centered interpreting teaching model and the MC teaching model, which one can better facilitate the internalization of T&I learners' motivation?

0.4 Significance of the study

By filling the gap through presenting the empirical evidence on MCs effectiveness of internalizing T&I learner's motivation, the study contributes to literature on the importance of MC and offers pedagogical suggestions for the design of MCs in professional interpreter training.

1 Theoretical Background

The self-determination theory (SDT) introduced by Ryan[22] is one of the most influential theories in motivational psychology[23]. According to the SDT[24], different types of motivation underlie human behavior. These types of motivation are posited to differ in their inherent levels of self-determination. Self-determination involves a true sense of choice, a sense of feeling free in doing what one has chosen to do. "Self-determination (i.e., autonomy) is seen as a prerequisite for any behavior to be intrinsically rewarding"[25]. Listed on a continuum from high to low levels of self-determination, these motivations are intrinsic motivation, extrinsic motivation, and amotivation.

Intrinsic motivation pertains to activities that are engaged in for their own sake, in other words, for the pleasure and satisfaction derived from performing them. When intrinsically motivated, people engage in activities that interest them, and they do so freely, with a full sense of volition and without the necessity of material reward or constraints[24]. Intrinsically motivated behaviors represent the prototype of self-determination. They emanate from the self and are fully endorsed.

On the other hand, extrinsic motivation is instrumental in nature which pertains to a wide variety of behaviors where the goals of action extend beyond those inherent in the activity itself.

Besides intrinsic and extrinsic motivation, Deci and Ryan[24] have proposed a third motivational concept, amotivation, to fully understand human behavior. When amotivated, individuals experience a lack of contingency between their behaviors and outcomes. Their behaviors are neither intrinsically nor extrinsically motivated.

Extrinsic motivation can be further classified into four types between self-determined and controlled forms of motivation. These are:

a. External regulation: It represents the least autonomous forms of extrinsic motivation. These behaviors are simply performed to satisfy an external demand or reward; consequently, there exists an external perceived locus of control[26].

b. Introjected regulation: It is a "type of internal regulation that is still quite controlling because people perform such actions with the feeling of pressure to avoid guilt and anxiety to attain ego enhancements or pride"[27]. A classic form of introjection is ego involvement[28] to enhance or maintain self-esteem and the feeling of worth.

c. Identification: It represents a more autonomous form of extrinsic motivation. It occurs when the

individual thinks that it is beneficial for her/himself, and accepts the process. "The individual identifies and appreciates the importance of behavior and accepts his/her self-regulation."[29]

d. Integration: Ryan and Deci[27] regard it as the most autonomous and self-determined form of extrinsic motivation. This type of extrinsic motivation shares many qualities with intrinsic motivation[30]. However, it is still extrinsic since "behavior motivated by integrated regulation is done for its instrumental value with respect to some outcome that is separate from the behavior"[27].

The complete self-determination continuum developed by Deci and Ryan can be shown in Figure 1[30] which embodies the motivational self-regulatory, and perceived locus of causality bases of behaviors that vary in the degree to which they are self-determined.

Internalization is a proactive process through which people transform regulation by external contingencies into regulation by internal processes[31]. In SDT, internalization is viewed as a motivated process. SDT argues that conditions supporting the three inherent needs (i.e., autonomy, competence, and relatedness) can foster the internalization of motivation. "Competence involves understanding how to attain various external and internal outcomes and being efficacious in performing the requisite actions; relatedness involves developing secure and satisfying connections with others in one's social milieu; and autonomy refers to being self-initiating and self-regulating of one's own actions"[32].

A great deal of research in the past two or three decades has explored how various aspects of social environment affect people's intrinsic motivation and autonomous self-regulation. A central hypothesis of SDT is that social contexts that support people being competent, related, and autonomous will promote intentional (i.e., motivated) action, and furthermore, that support for autonomy, in particular, will facilitate that motivated action's being self-determined (rather than controlled). Thus, supports for competence (e.g., positive feedback) will enhance motivation in general but will enhance intrinsic motivation and integrated internalization only if it is administered in a way that is autonomy supportive[22].

1.1 Research on support for competence and relatedness

The effects of supports for competence and relatedness on motivation and internalization have been investigated in a variety of studies. For example, positive feedback has generally been found to increase intrinsic motivation because it enhances perceived competence[33,34].

Vallerand and Reid[35,36] find higher levels of intrinsic motivation after positive than after negative feedback. Field studies have also linked perceived competence to intrinsic motivation and identified self-regulation in education[37,38].

A few studies have explored the effects of adults' interpersonal involvement or relatedness on children's intrinsic motivation and autonomous self-regulation. Evidence shows that when children are denied the interpersonal involvement they desire, they can lose intrinsic motivation[39]. Field studies on interpersonal involvement have also indicated that parents and teachers who are more involved with their children have children who are more motivated and self-determined, particularly, when the involvement is accompanied by autonomy support[37,40].
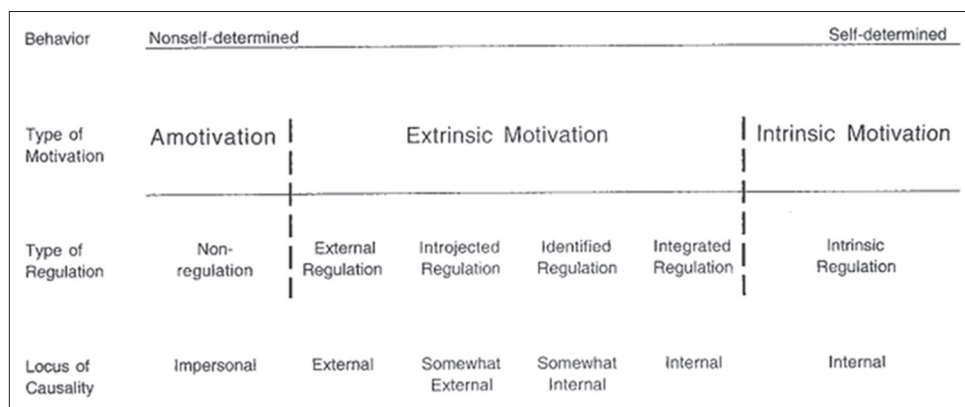

Figure 1. The self-determination continuum[30]

1.2 Research on support for self-determination

In several recent studies, self-determined motivation has been linked to various educational outcomes across the age span, from early elementary school to college students. Some of these studies[41,42] have shown that students who had more self-determined forms of motivation for doing schoolwork are more likely to stay in school than students who had less self-determined motivation. Pintrich and De Groot[43] have linked intrinsic motivation and autonomous forms of extrinsic motivation to positive academic performance.

Williams and Deci[44] conducted two studies testing SDT of internalization with 2nd-year medical students in an interview course, confirming the important link between students' self-determination and their psychological beliefs.

2   Research Methodology

2.1 Research question

The research question is: Of the traditional teacher-centered teaching model and the MC model, which one can better facilitate the internalization of motivation?

2.2 Research design

The study is a 2-week long horizontal and vertical study which examines the effect of MC in comparison with the traditional interpreting teaching model on the internalization of T&I learners' motivation. In week 1, questionnaires were administered and collected onsite at class, respectively (February 29, 2016, for the control group and March 2 for the experiment group), to determine the baseline of participants' (refer to 3.2.2) self-regulated learning motivation, the satisfaction level of their basic psychological needs, and intrinsic motivation under the traditional teaching model. On March 2, in week 1, the experiment group was informed by the author that on March 9 there would be a MC (refer to 3.2.3) and they volunteered to undertake a certain role in the MC. They had 1 week preparation for this MC. On March 7, the author administered and collected the questionnaires onsite at the end of the class at the control group. On March 9, the questionnaires were also administered and collected onsite in class at the end of the class for the experiment group.

2.2.1   Research instrument: Three questionnaires

Altogether, three questionnaires were employed to assess T&I learners' type of learning motivation, the satisfaction level of the three basic psychological needs, and level of intrinsic motivation under different teaching models.

The first questionnaire "Why do you participate in the MC/the E-C interpreting class?" is adapted from The Situational Motivation Scale[45]. The items are rated on a 7-point Likert scale ranging from 1 (corresponds not at all) to 7 (corresponds exactly).

After slight revision, the first questionnaire is developed to assess the intrinsic motivation, identified regulation, external regulation, and amotivation[46] in participating in MC or attending the E-C interpreting class. The questionnaire enjoys sound validity, and internal consistency as the Cronbach's Alpha of each sub-scale substantially exceeds the inclusion criteria of 0.60–0.69[47] (supplementary information).

The second questionnaire "Your feelings in MC" is adapted from the Activity-Feeling State (AFS)[48] scale which consists of 13 items with a 1–7 response scale (strongly disagree through strongly agree) for each of the item. The original AFS assesses the psychological needs of self-determination, competence, relatedness, and tension in a given task. After revision, "Your feelings in MC" comes into being. It enjoys sound validity, and internal consistency as the Cronbach's Alpha of each sub-scale is 0.875, 0.744, and 0.725. Totals for each scale are computed by averaging the relevant three items.

The third questionnaire "The MC and Me" is adapted from the Intrinsic Motivation Inventory (IMI)[49] which consists of 18 items to assess interest-enjoyment, perceived competence, effort-importance, and tension-pressure in a certain task. It is worth mentioning that only the interest-enjoyment dimension of the IMI assesses the intrinsic motivation itself. Therefore the third questionnaire, after being revised, employs the interest-enjoyment dimension. Cronbach's Alpha of the scale is 0.727.

2.2.2   Participants: The control group and the experiment group

To control the variable in the experiment, participants were from two parallel classes, Class 7 and Class 4 in the 1st year of their graduate study taught by the same teacher: Dr. Lin Wei at the Graduate School of Translation and Interpretation of Beijing Foreign Studies University. On a voluntary basis, Class 7 is the control group and Class 4 is the experiment group. In this case, the independent factor is the teaching strategy,

and the dependent variables are the motivation type, the satisfaction level of the three psychological needs and intrinsic motivation.

2.2.3 Design of MC

The MC is designed according to the three psychological needs of SDT, featuring autonomy, competence, and relatedness. The procedures of the conference design consist of the following five steps.

- Step 1: Students, the instructor and the researcher reached a consensus on the theme, duration and organization of the conference (Autonomy)

In week 1, the experiment group was told by the researcher that there would be a MC in week 2 and their participation was voluntary. The theme of the conference and students' role in the conference was chosen by the students themselves. The three parties also reached an agreement that the duration of MC was 1 h, and the remaining 1 h was dedicated to the instructor's feedback to the performance of students through replaying the videotape of the whole conference. After the group discussion, the schedule of the conference was determined (Supplementary information).

- Step 2: Students and instructor structured the MC (Relatedness)

Having decided the theme of the MC, students teamed up to structure the whole conference. As indicated in the above table, everyone was in charge of a peculiar task to establish a cooperative, working and learning context. After the MC, the instructor gave feedback to students, which greatly boosted students' feeling of relatedness.

- Step 3: Preparation of the conference (Competence)

Interpreters in MC were competent to perform the task as they have received solid training on consecutive interpreting in both language directions (English to Chinese and Chinese to English). Furthermore, they did thorough background research to ensure his/her understanding of the subject matter, which also greatly advanced their feeling of competence. In the conference, speakers' and moderator's feeling of competence was also bolstered when preparing their speeches, for example, gathering, analyzing, and compiling information when preparing for their speech.

- Step 4: Students presented the final product (The trio of autonomy, competence, and relatedness in class)

After 1 week's preparation, students were ready to present the final outcome of their project, and each student had the chance to perform his/her task on stage. First, the moderator: Student LQ and her interpreter: Student ZY introduced to the audience rundown of the seminar, background information of environmental protection and invited speakers.

Next, the other eight students took turns to perform his/her task. The speakers shared their understanding of climate change and their experience in fighting climate change. The interpreters delivered the interpretation accordingly.

Third, the Q&A session: The other 4 students engaged in this session. The reporters exchanged views with the speakers on the issue of climate change.

The whole conference was videotaped for later class discussion.

- Step 5: Thorough in-class discussion of students' performance after the MC (Relatedness)

After the MC, students and the instructor had a thorough discussion in class. The instructor analyzed the strengths and weaknesses of students' performance and offered them suggestions for their later interpreting learning. Furthermore, based on her first-hand conference interpreting experience, the teacher also provided pragmatic suggestions to help interpreters ease the nervousness and keep the professional manner. For example, even if they did not get the whole point of the speaker, they still should calm down and deliver the message at their best. Moreover, the teacher suggested as follows:

1. Apart from the note-taking pad, if possible, interpreters could also print out the slides of the speakers beforehand to facilitate the onsite interpretation.
2. If permitted, interpreters could sit down in front of a desk, so that they would be able to see all the printed materials instead of standing there and juggling with the materials on their hands.
3. To ease their onsite nervousness, interpreters could negotiate with the organizer of the event and ask for a quieter place without the public focus to ensure high-quality delivery.
4. Interpreters should have the self-monitoring awareness in interpretation so as to ensure the message they deliver is logical.
5. The register of the interpretation message should be consistent with that of the speaker.

2.2.4 Administration of three questionnaires

In week 1, the three questionnaires were administered at class to the control and experiment group, respectively,

to determine the baseline of their type of motivation, their intrinsic motivation and the satisfaction level of their psychological needs in the traditional teaching model.

In week 2, the three questionnaires were administered at class to the control and experiment group, respectively, to identify changes on top of the baseline.

2.3 Data collection and analysis

Week 1: 12 copies were sent out onsite the class in the control group. Thanks to the cooperation of the participants, the recovery rate was 100%. 14 copies were sent out onsite the class in the experiment group and the recovery rate was also 100%.

Week 2: The recovery rates were the same as those in week 1.

Data from the three questionnaires were analyzed with PASW Statistics 18.0 software (also known as Statistical SPSS) for the validity and reliability of the questionnaires. To ensure accuracy, the data entry process was checked twice by the author. Furthermore, an independent sample test was conducted to determine whether the difference in the motivation type, the satisfaction level of the three psychological needs, and the intrinsic motivation between the control group and the experiment group was statistically significant under different teaching models. Moreover, a paired sample test was executed to investigate whether the difference in the motivation type, the satisfaction level of the three psychological needs, and the intrinsic motivation before the MC and after the MC were statistically significant in the experiment group.

3 Results and Analysis of the Questionnaires

3.1 Type of motivation under different teaching models

1. In the control group, intrinsic motivation is enhanced from 4.77 in week 1 to 5.48 in week 2. Furthermore, the level of identified regulation increases from 5.88 to 5.94. Moreover, the external regulation is up from 4.52 to 4.92. On the other hand, the level of amotivation is down from 2.17 to 2.02.
2. In the experiment group, the level of intrinsic motivation is up from 5.52 in week 1 to 5.93 in week 2. Furthermore, the level of identified regulation increases from 6.13 to 6.23 in week 2. Moreover, external regulation is down from 4.45 to 4.39. The figure of amotivation decreases from 1.7 to 1.66.

From Figure 2, we can see the internalization process occurs in the experiment group as intrinsic motivation is enhanced and external regulation, the lower level of self-determination is decreased. This attests to the SDT which argues that conditions supporting the three inherent needs (i.e., autonomy, competence, and relatedness) can foster internalization of motivation. However, the internalization process is partial, because identified regulation, extrinsic motivation has not been reduced. Moreover, identified regulation still ranks highest in both groups, denoting that T&I learners are still motivated by extrinsic motivation in their interpreting learning.

In contrast, the internalization process fails to take place in the control group, as intrinsic motivation and both of extrinsic motivation, identified regulation, and external regulation increases, which can be explained through the combination of both extrinsic and intrinsic learning motivational orientations of interpreting learners at the graduate level in China[21].

3.2 Satisfaction level of the three basic psychological needs under different teaching models

Figure 3 demonstrates the satisfaction level of the three basic psychological needs under different teaching models. The figures of autonomy, competence, and
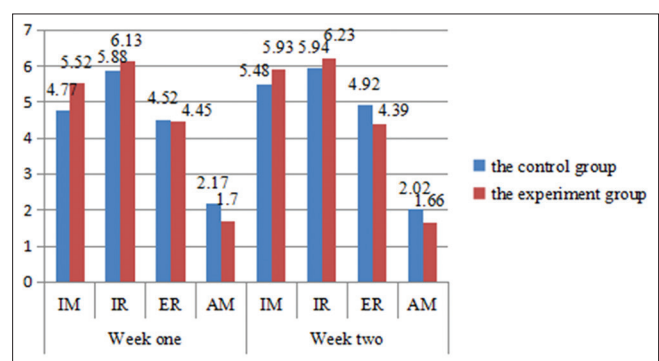

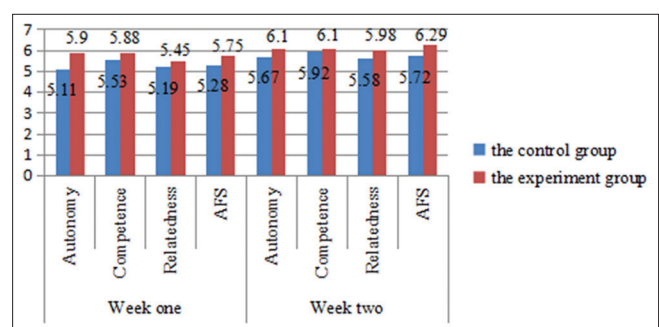**Figure 2.** Type of motivation under different teaching models

Figure 3. Satisfaction level of the three basic psychological needs under different teaching models

relatedness, as well as the average score of the three, are higher in the experimental group than those in the control group. We can see that the MC teaching model, instead of the traditional teaching model, gives fuller play to students' inherent needs of autonomy, competence, and relatedness, which explains why the internalization process happens in the experiment group rather than the control group.

3.3 The IMI: Comparisons between week 1 and week 2 for each group

Figure 4 tracks the changes in the intrinsic motivation in week 1 and week 2 of both groups under different teaching models. For the control group, the figure is up from 5.07 in week 1 to 5.64 in week 2. For the experiment group, the figure increases from 5.58 in week 1 to 5.96 in week 2. The reason for the figure to be up by 0.57 in the control group under the traditional teaching model is also attributed to both of extrinsic and intrinsic nature in the learning motivational orientations of interpreting learners at the graduate level in China[21]. The reason for the figure to be up by 0.32 in the experiment group is that the MC, supportive of the three psychological needs of autonomy, competence, and relatedness facilitates the internalization of motivation; therefore, T&I learners under the MC model are more self-determined. As a result, they exhibit a higher level of intrinsic motivation.

3.4 Independent samples test results reading

Data sets of independent samples test results reading can be seen in the supplementary information.

3.4.1 Motivation type

In the experiment, the independent variable is the teaching model; dependent variable is the motivation type. To determine whether the difference in the motivation type under different teaching models is statistically significant, the independent samples test is conducted.
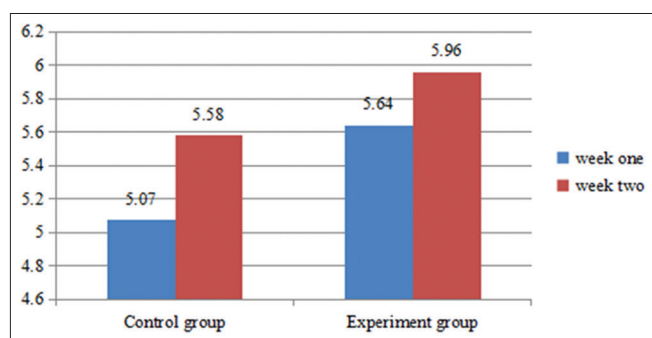

Figure 4. Intrinsic motivation under different teaching models

According to the Levene's Test for Equality of Variances, P value of the intrinsic motivation is 0.114>0.05; therefore, the overall variance in the two groups is equal[47].

Intrinsic motivation under traditional teaching model (M = 5.4792, SD = 1.08428) is lower than that in MC (M = 5.9286, SD = 0.76854), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = -1.233,$$

$$P = 0.230 > 0.05,$$

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = -1.233 * \sqrt{\frac{12+14}{12*14}} = -0.48506.$$

According to the benchmark criteria 0.2, 0.5, and 0.8 set by Cohen[50], d value is not significant.

P value of the identified regulation in Levene's test for Equality of Variances is 0.042<0.05; therefore, the overall variance in the two groups is not equal[47].

Identified regulation under traditional teaching model (M = 5.9375, SD = 1.00637) is lower than that after MC (M = 6.2321, SD = 0.58395), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = -0.893,$$

$$P = 0.384 > 0.05,$$

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = -0.893 * \sqrt{\frac{12+14}{12*14}} = -0.3513.$$

P value of external regulation in Levene's Test for Equality of Variances is 0.483>0.05; therefore, the overall variance in the two groups is equal[47].

External regulation under traditional teaching model (M = 4.9167, SD = 1.19342) is higher than that after MC (M = 4.3929, SD = 1.34706), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = 1.041,$$

$$P = 0.308 > 0.05,$$

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = 1.041 * \sqrt{\frac{12+14}{12*14}} = -0.409.$$

P value of amotivation in Levene's Test for Equality of Variances is 0.559>0.05; therefore, the overall variance in the two groups is equal[47].

Amotivaiton under traditional teaching model (M = 2.0208, SD = 1.00260) is higher than that after MC (M = 1.6607, SD = 0.83555), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = 0.999,$$

P = 0.328>0.05,

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = 0.999 * \sqrt{\frac{12+14}{12*14}} = -0.393.$$

3.4.2 Satisfaction level of the three psychological needs

P value of satisfaction level of the three psychological needs in Levene's Test for Equality of Variances is 0.168>0.05; therefore, the overall variance in the two groups is equal[50].

Satisfaction level of three psychological needs under traditional teaching model (M = 5.7222, SD = 0.88319) is lower than that after MC (M = 6.0007, SD = 0.72094), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = 0.886,$$

P = 0.385>0.05,

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = -0.886 * \sqrt{\frac{12+14}{12*14}} = -0.349.$$

3.4.3 Intrinsic motivation

P value of intrinsic motivation in Levene's Test for Equality of Variances is 0.124>0.05; therefore, the overall variance in the two groups is equal[47].

Intrinsic motivation under traditional teaching model (M=5.5833, SD=0.99255) is lower than that after MC (M=5.9571, SD=0. 58272), but the difference is not statistically significant as

$$t(24) = \frac{\text{Mean Differences}}{\text{Standard error difference}} = -1.19,$$

P = 0.245>0.05,

$$d = t * \sqrt{\frac{N1+N2}{N1N2}} = -1.19 * \sqrt{\frac{12+14}{12*14}} = -0.468.$$

In summary, the differences in motivation type, the satisfaction level of three psychological needs and intrinsic motivation under different teaching models is not statistically significant. This may be due to two reasons accounting for affecting the Levene Test result: (1) The independence of the data is not guaranteed[47]. The two groups' participants may interact with each other about the experiment, which breaches the independence principle. (2) The sample of each group is not the same: 12 participants in the control group and 14 in the experiment group.

3.5 Paired samples test results reading

Data sets of all paired samples test results reading can be seen in the supplementary information.

3.5.1 Motivation type

In the experiment, the independent variable is the teaching model; dependent variable is the motivation type. To determine whether the difference in the motivation type before and after the MC is statistically significant, the paired samples test is executed.
As three participants in the experiment group prefer to remain anonymity in their questionnaires, the number of the sample in the paired sample test is reduced from 14 to 11.
Intrinsic motivation before MC (M = 5.4545, SD = 0.77313) is lower than that of after MC (M = 5.9318, SD = 0.66230).
Identified regulation before MC (M = 6.0682, SD = 0.75904) is lower than that of after MC (M = 6.2273, SD = 0.57505).
External regulation before MC (M = 4.2500, SD = 1.25996) is higher than that of after MC (M = 4.2273, SD = 1.36681).
Amotivation before MC (M = 1.8864, SD = 1.05690) is higher than that of after the MC (M = 1.7500, SD = 0.91515). Later, we will discuss whether the differences are statistically significant.

Intrinsic motivation before MC (M = 5.4545, SD = 0.77313) is statistically significant lower than that of after MC (M = 5.9318, SD = 0.66230),

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= −2.988, $P = 0.014 < 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}} = -0.901.$$

Identified regulation before MC (M = 6.0682, SD = 0.75904) is lower than that of after MC (M = 6.2273, SD = 0.57505), but the difference is not statistically significant as

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= −1.136, $P = 0.283 > 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}} = -0.343.$$

External regulation before MC (M = 4.2500, SD = 1.25996) is higher than that of after MC (M = 4.2273, SD = 1.36681), but the difference is not statistically significant as

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= 0.056, $P = 0.957 > 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}} = 0.017.$$

Amotivation before MC (M = 1.8864, SD = 1.05690) is higher than that of after MC (M = 1.7500, SD = 0.91515), but the difference is not statistically significant as

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= 0.700, $P = 0.500 > 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}} = 0.211.$$

3.5.2 Satisfaction level of the three psychological needs

Satisfaction level of the three psychological needs before the MC (M = 5.7273, SD = 0.59845) is lower than that of after the MC (M = 6.0418, SD = 0.64541) and the difference is statistically significant as

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= −2.697, $P = 0.022 < 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}} = -0.813.$$

3.5.3 Intrinsic motivation

Intrinsic motivation before MC (M = 5.5273, SD = 0.73361) is lower than that of after MC (M=5.9818, SD=0.55465). The difference is statistically significant as

$$t(10) = \frac{\text{Mean Difference}}{\text{Standard error mean of paired differences}}$$

= −2.731, $P = 0.021 < 0.05$,

$$d = \frac{\text{Mean Differences}}{\text{Standard deviation of paired differences}}$$

= −0.823.

In summary, the difference in intrinsic motivation, the satisfaction level of three psychological needs as well as intrinsic motivation in motivation type is statistically significant before and after MC.

4 Conclusion

4.1 Summary of key findings

Based on the empirical study, the research concludes that compared with the traditional teacher-centered interpreting class, MC can better facilitate the internalization of T&I learners' motivation as manifested by:
1. Changes in the motivation type
   a. Higher level of intrinsic motivation in the motivation type, highest degree of self-determination under the MC teaching model (M = 5.9286, SD = 0.76854) as opposed to the traditional teaching model (M = 5.4792, SD = 1.08428);
   b. Higher level of identified regulation, a higher degree of self-determination second to the intrinsic motivation under the MC (M = 6.2321, SD = 0.58395) compared with that under the traditional teaching model (M = 5.9375, SD = 1.00637);
   c. Lower level of external regulation under the MC (M = 4.3929, SD = 1.34706) as opposed to that under the traditional teaching model (M = 4.9167, SD = 1.19342);

d. Lower level of amotivation under the MC (M = 1.6607, SD = 0.83555) compared with that under the traditional teaching model (M = 2.0208, SD = 1.00260).

2. Higher satisfaction levels of the three psychological needs under the MC (M = 6.0007, SD = 0.72094) than that in the traditional teaching model (M = 5.7222, SD = 0.88319).

3. Higher levels of intrinsic motivation under the MC (M = 5.9571, SD = 0. 58272) than that in the traditional teaching model (M = 5.5833, SD = 0.99255).

4. The differences in the motivation type, the satisfaction levels of the three psychological needs and intrinsic motivation before and after the MC are statistically significant as P values in the paired sample test are <0.05:
   • In terms of the motivation type, P (intrinsic motivation) = 0.014<0.05.
   • In terms of the satisfaction level of the three psychological needs, P = 0.022<0.05.
   • In terms of intrinsic motivation, P = 0.021<0.05.

However, the internalization process is partial because:
1. Among the motivation type in the experiment group after the MC [refer to Figure 2], the identified regulation: An external regulation (M = 6.23) still ranks the highest, with the intrinsic motivation being the second (M = 5.93), the external regulation being the third (M = 4.39), and amotivation being the last (M = 1.66).

2. In the independent samples test, the difference between the motivation type, the satisfaction levels of the three psychological needs, and the intrinsic motivation is not statistically significant:
   a. In terms of the motivation type, P (intrinsic motivation) = 0.230>0.05, P (identified regulation) = 0.384>0.05, P (external regulation) = 0.308>0.05, and P (amotivation) = 0.328>0.05.
   b. In terms of the satisfaction level of the three psychological needs, P = 0.385>0.05.
   c. In terms of intrinsic motivation, P = 0.245>0.05.

4.2 Implications for the design of MC

According to the research findings, MCs are effective in the internalization of T&I learners' motivation.

However, as discussed in 5.1, the internalization process is partial. Therefore, the design of MC should be further explored so as to facilitate the complete internalization process.

MCs should be as authentic as possible to reflect the professional reality. It may begin by inviting mono-lingual speakers to classrooms[16,20] so that all students have a chance to become interpreters. MCs can also be a term project, which can be introduced at the beginning of the second semester at the 1st year of graduate T&I learning.

4.3 Limitations of the study

The limitations of the study lie in three aspects. First, the sample: Two parallel classes in their 1st year of T&I learning at the graduate level are not representative of all Chinese T&I learners. Therefore, the survey results may not be nationally representative. It is desirable to distribute a more sophisticated survey to a larger scale of T&I learners to investigate nationally the effectiveness of MCs in the internalization of T&I learners' motivation. Second, the duration of the experiment is not long enough to track more precisely the changes in T&I learners' type of motivation which is a gradual process. It is ideal to track the change over a longer period of time, for example, a semester. Third, the Levene Test result of the experiment is affected by two factors: (1) The violation of the independence principle as the two groups' participants may interact with each other about the experiment; and (2) the unevenness of the sample size: 12 participants in the control group and 14 in the experiment group. Another experiment that overcomes the limitation is desirable to generate a more precise result.

In conclusion, this research is a tentative study to explore the effectiveness of MCs in the internalization of T&I learners' motivation, a complicated construct. More experimental studies in this aspect are expected to help us better understand the effectiveness of MCs in conference interpreting and design more authentic MCs so as to harvest better learning outcomes.

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APPENDIX

Table 1. Reliability and internal consistency of the 1st questionnaire

Factor	Survey item	Cronbach's alpha
Intrinsic motivation	Item 1 Because I think that mock conference is interesting.	0.736
	Item 5 Because I think that mock conference is pleasant.	
	Item 9 Because mock conference is fun.	
	Item 13 Because I feel good when I am in mock conference.	
Identified regulation	Item 2 Because I am doing it for my own good.	0.623
	Item 6 Because I think that mock conference is good for me.	
	Item 10 By personal decision.	
	Item 14 Because I believe that mock conference is important for me.	
External regulation	Item 3 Because I am supposed to do it.	0.883
	Item 7 Because it is something that I have to do.	
	Item 11 Because I don't have any choice.	
	Item 15 Because I feel that I have to do it.	
Amotivation	Item 4 There may be good reasons to participate in mock conference, but personally I don't see any.	0.863
	Item 8 I attend mock conference but I am not sure if it is worth it.	
	Item 12 I don't know; I don't see what mock conference brings me.	
	Item 16 I attend mock conference, but I am not sure it is a good thing to continue.	

Table 2. Reliability and internal consistency of the 2nd questionnaire

Factor	Survey item	Cronbach's alpha
Autonomy	Item 3 I am offered choice what to do.	0.875
	Item 6 I'm doing what I want to be doing.	
	Item 9 I am willing to participate in the mock conference.	
Competence	Item 1The advice provided by the instructors is very helpful for my own learning process.	0.744
	Item 5 In the mock conference I get an idea of my level of achievement.	
	Item 8 I experience pleasure while I am surpassing myself in the interpretation/public speaking/Q-A	
Relatedness	Item 2 I have a sense of belonging.	0.725
	Item 4 I am involved with the class.	
	Item 7 I am emotionally close to my instructor and classmates.	

Table 3. Reliability and internal consistency of the 3rd questionnaire

Factor	Survey item	Cronbach's alpha
INT-ENJ	Item 1 I enjoyed the mock conference very much	0.727
	Item 2 Attending the mock conference was fun.	
	Item 3 I would describe the mock conference as very interesting.	
	Item 4 While the conference is going on, I was thinking about how much I enjoyed it	
	Item 5 The conference did not hold my attention. (R)	

Student Name	Role in the MC
LY	Chinese speaker1
SL	Interpreter1
SSY	English speaker1
LYF	Interpreter 2
DCC	Chinese speaker 2
LM	Interpreter 3
ZZJ	English speaker 2
JYJ	Interpreter 4
ZYF	Chinese reporter1
LJJ	Interpreter 5
FY	English reporter 2
LH	Interpreter 6
LQ	MC
ZY	Interpreter 7

Notes: Speakers should upload his/her presentation outline at least 2 days before the mock conference to ensure that the interpreters have a rough understanding of the topic. In the interest of time, speakers should limit their speech to 5 minutes.

Table 5. Group statistics of motivation type

Group statistics						
	Strategy	N	Mean	Std. Deviation	Std. error mean
IM	traditional teaching model	12	5.4792	1.08428	0.31300
	mock conference	14	5.9286	0.76854	0.20540
IR	traditional teaching model	12	5.9375	1.00637	0.29051
	mock conference	14	6.2321	0.58395	0.15607
ER	traditional teaching model	12	4.9167	1.19342	0.34451
	mock conference	14	4.3929	1.34706	0.36002
AM	traditional teaching model	12	2.0208	1.00260	0.28943
	mock conference	14	1.6607	0.83555	0.22331

Table 6. Group statistics of three psychological needs' satisfaction level

Group Statistics					
	Strategy	N	Mean	Std. deviation	Std. error mean
PSYCHO needs	traditional teaching model	12	5.7222	0.88319	0.25495
	mock conference	14	6.0007	0.72094	0.19268

Table 7. Group statistics of the intrinsic motivation

Group statistics					
	Strategy	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic Motivation	traditional teaching model	12	5.5833	0.99255	0.28652
	mock conference	14	5.9571	0.58272	0.15574

Table 8. Independent samples test of motivation type

	Levene's Test for equality of variances		t-test for equality of means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	95% Confidence interval of the difference	
							Lower	Upper
Equal variances assumed	2.691	0.114	-1.233	24	0.230	-0.44940	-1.20183	0.30302
Equal variances not assumed			-1.200	19.460	0.244	-0.44940	-1.23174	0.33293
Equal variances assumed	4.631	0.042	-0.930	24	0.362	-0.29464	-0.94869	0.35941
Equal variances not assumed			-0.893	17.063	0.384	-0.29464	-0.99023	0.40094
Equal variances assumed	0.509	0.483	1.041	24	0.308	0.52381	-0.51460	1.56222
Equal variances not assumed			1.051	23.963	0.304	0.52381	-0.50471	1.55233
Equal variances assumed	0.351	0.559	0.999	24	0.328	0.36012	-0.38354	1.10377
Equal variances not assumed			0.985	21.537	0.336	0.36012	-0.39895	1.11919

Table 9. Independent samples test of three psychological needs' satisfaction level

	Levene's test for equality of variances		T-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference	95% Confidence interval of the difference	
								Lower	Upper
Equal variances assumed	2.021	0.168	-0.886	24	0.385	-0.27849	0.31448	-0.92756	0.37057
Equal variances not assumed			-0.871	21.280	0.393	-0.27849	0.31957	-0.94255	0.38557

Table 10. Independent samples test of intrinsic motivation

Independent Samples Test										
		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
IM	Equal variances assumed	2.543	0.124	-1.19	24	0.245	-0.37381	0.31360	-1.02105	0.27343
	Equal variances not assumed			-1.146	17.190	0.267	-0.37381	0.32611	-1.06127	0.31365

Table 11.Paired samples statistics of motivation type

		Mean	N	Std. Deviation	Std. error mean
Pair 1	IMmeanbef	5.4545	11	0.77313	0.23311
	IMmeanaft	5.9318	11	0.66230	0.19969
Pair 2	IRmeanbef	6.0682	11	0.75904	0.22886
	IRmeanaft	6.2273	11	0.57505	0.17338
Pair 3	ERmeanbef	4.2500	11	1.25996	0.37989
	ERmeanaft	4.2273	11	1.36681	0.41211
Pair 4	AMmeanbef	1.8864	11	1.05690	0.31867
	AMmeanaft	1.7500	11	0.91515	0.27593

Paired samples statistics (header spanning)

Table 12. Paired samples statistics of satisfaction level of the three psychological needs

		Mean	N	Std. deviation	Std. error mean
Pair 1	PSYCHO needs before	5.7273	11	0.59845	0.18044
	PSYCHO needs after	6.0418	11	0.64541	0.19460

Paired Samples Statistics (header spanning)

Table 13.Paired samples statistics of intrinsic motivation

		Mean	N	Std. deviation	Std. error mean
Pair 1	IMs before	5.5273	11	0.73361	0.22119
	IM after	5.9818	11	0.55465	0.16723

Paired samples statistics (header spanning)

Table 14. Paired samples test of motivation type

	Paired differences					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Pair 1	-0.47727	0.52979	0.15974	−0.83319	−0.12135	−2.988	10	0.014
Pair 2	-0.15909	0.46466	0.14010	−0.47125	0.15307	−1.136	10	0.283
Pair 3	0.02273	1.35764	0.40934	−0.88935	0.93480	0.056	10	0.957
Pair 4	0.13636	0.64579	0.19471	−0.29748	0.57021	0.700	10	0.500

Paired samples test (header spanning)

Table 15. Paired samples test of satisfaction level of three psychological needs

		Paired samples test							
		Paired differences					t	df	Sig. (2-tailed)
		Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
					Lower	Upper			
Pair 1	Psychoneedsbef - Psychoneedsaft	-0.31455	0.38679	0.11662	−0.57440	−0.05470	−2.697	10	0.022

Table 16. Paired samples test of intrinsic motivation

		Paired samples test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
					Lower	Upper			
Pair 1	IMsbef - IMaft	-0.45455	0.55202	0.16644	−0.82540	−0.08369	−2.731	10	0.021